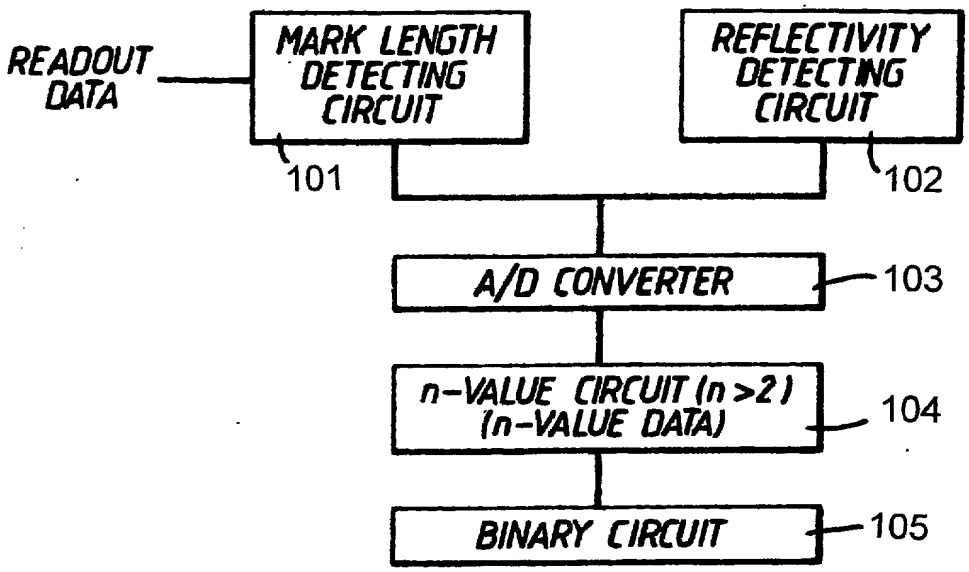

READOUT DATA
MARK LENGTH DETECTING CIRCUIT
REFLECTIVITY DETECTING CIRCUIT
101
102
A/D CONVERTER
103
n-VALUE CIRCUIT (n>2) (n-VALUE DATA)
104
BINARY CIRCUIT
105

FIG. 1

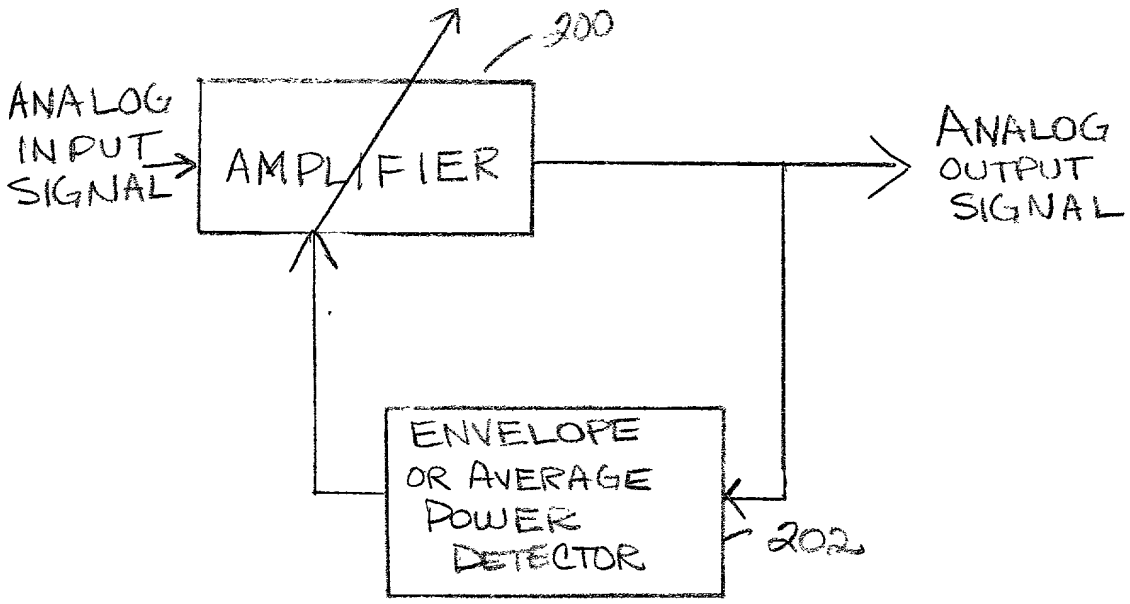


FIG 2A (PRIOR ART)

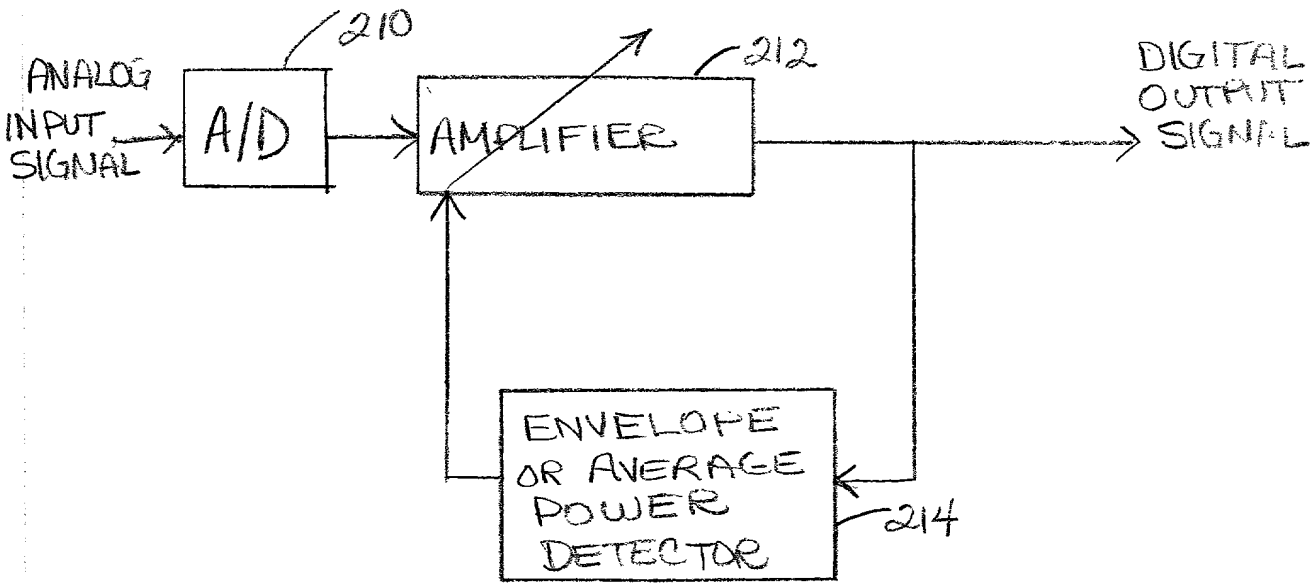


FIG 2B (PRIOR ART)

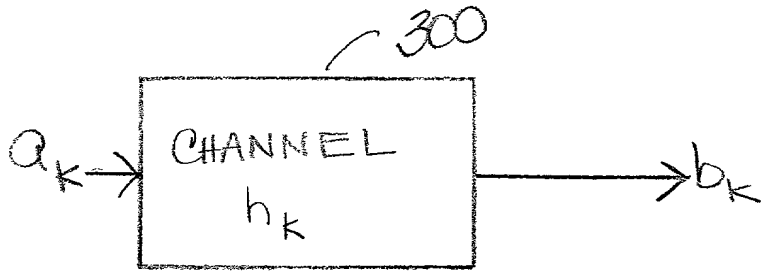
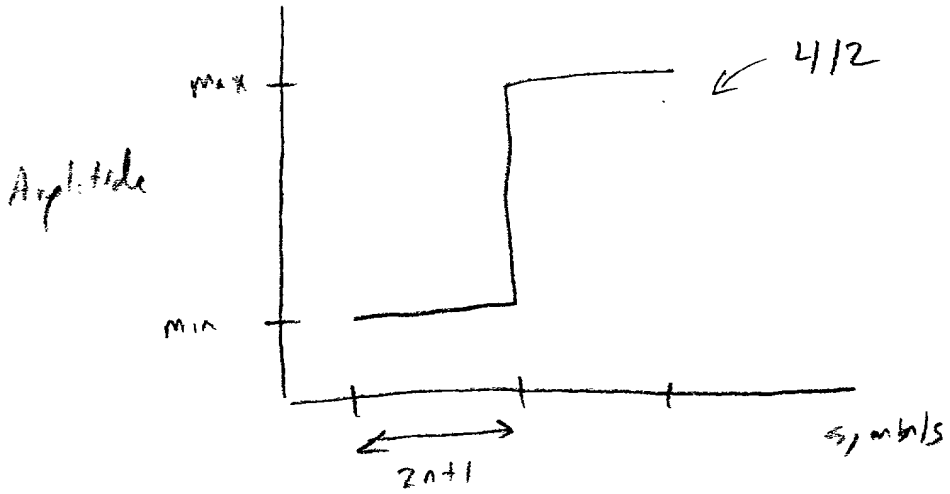


FIG 3

FIG. 4A


max
Amplitude
min
4/2
symbols
2n+1

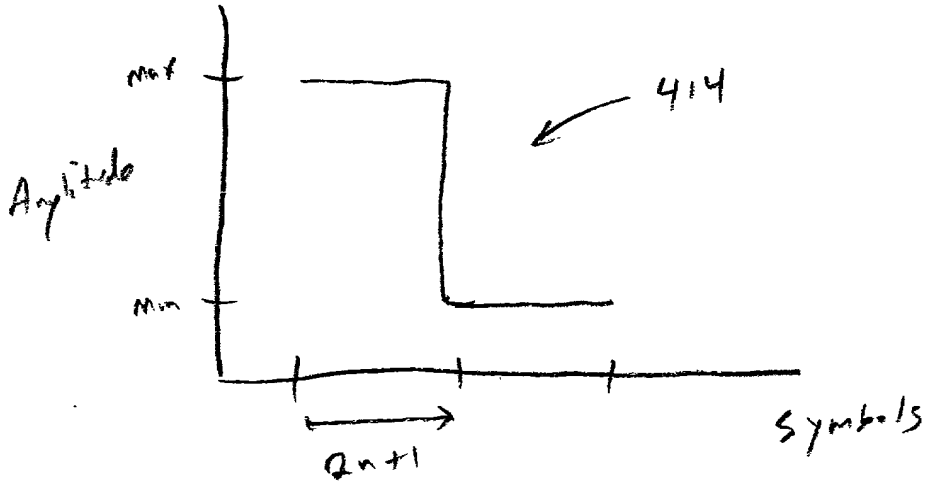

max
Amplitude
min
4/4
symbols
2n+1

Figure 4B

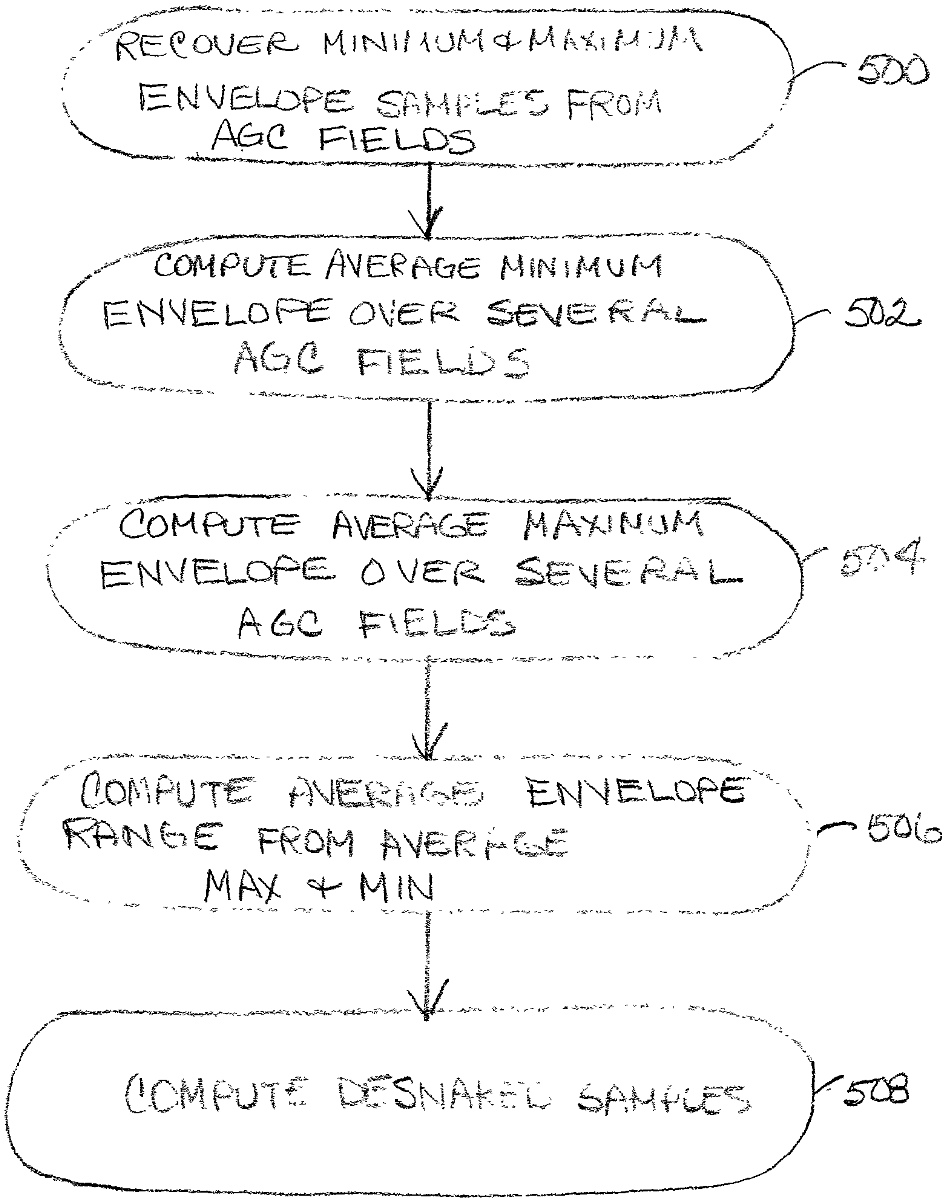

RECOVER MINIMUM & MAXIMUM ENVELOPE SAMPLES FROM AGC FIELDS
500
COMPUTE AVERAGE MINIMUM ENVELOPE OVER SEVERAL AGC FIELDS
502
COMPUTE AVERAGE MAXIMUM ENVELOPE OVER SEVERAL AGC FIELDS
504
COMPUTE AVERAGE ENVELOPE RANGE FROM AVERAGE MAX & MIN
506
COMPUTE DESNAKED SAMPLES
508

FIG. 5

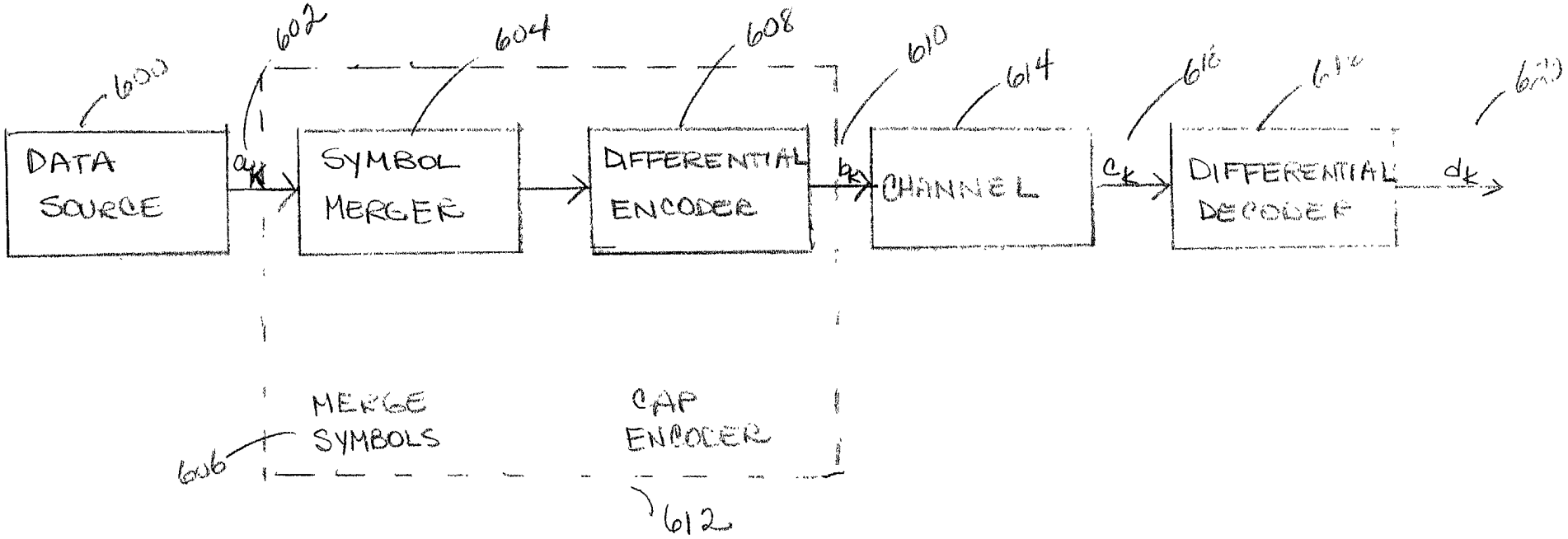

600
602
604
608
610
614
616
618
DATA SOURCE
a_k
SYMBOL MERGER
DIFFERENTIAL ENCODER
b_k
CHANNEL
c_k
DIFFERENTIAL DECODER
d_k
606
MERGE SYMBOLS
CAP ENCODER
612

FIG 6A

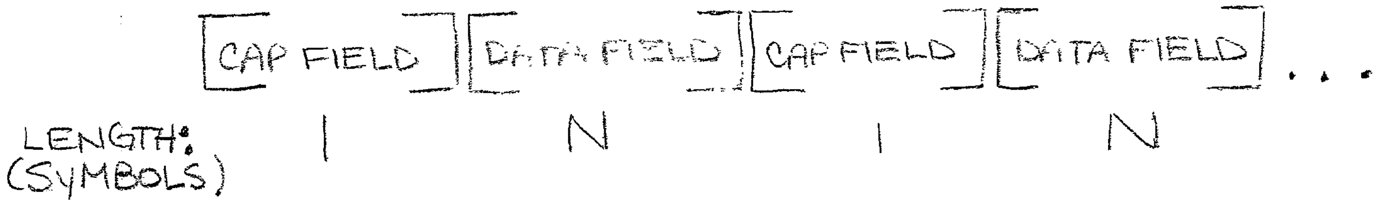

CAP FIELD
DATA FIELD
CAP FIELD
DATA FIELD
...
LENGTH:
(SYMBOLS)
1
N
1
N

FIG 6B

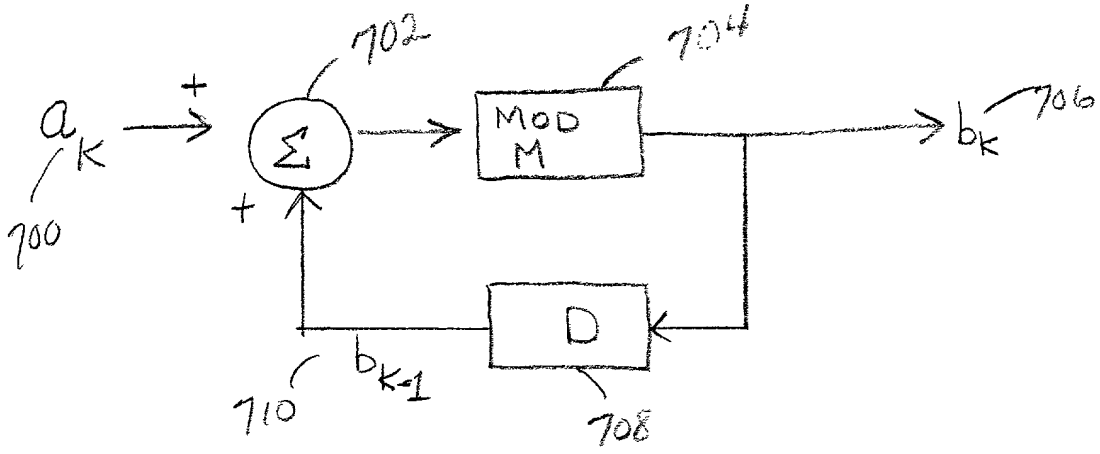


FIG 7A

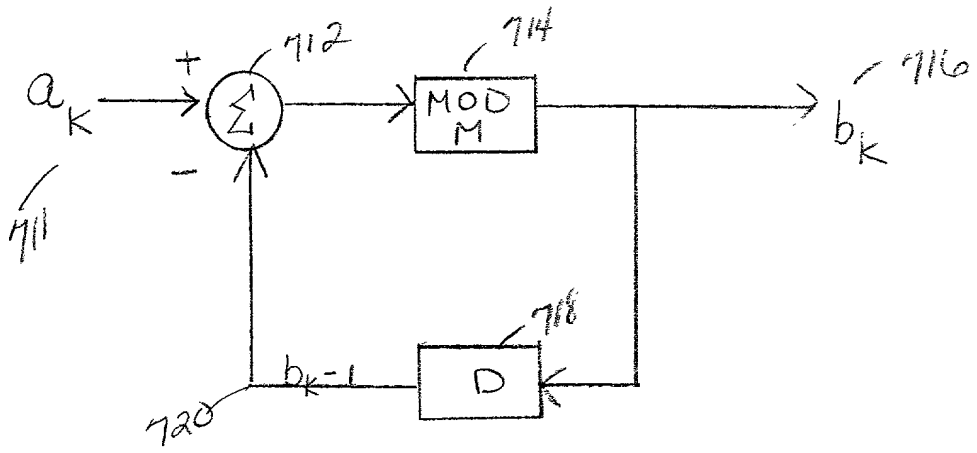


FIG 7B

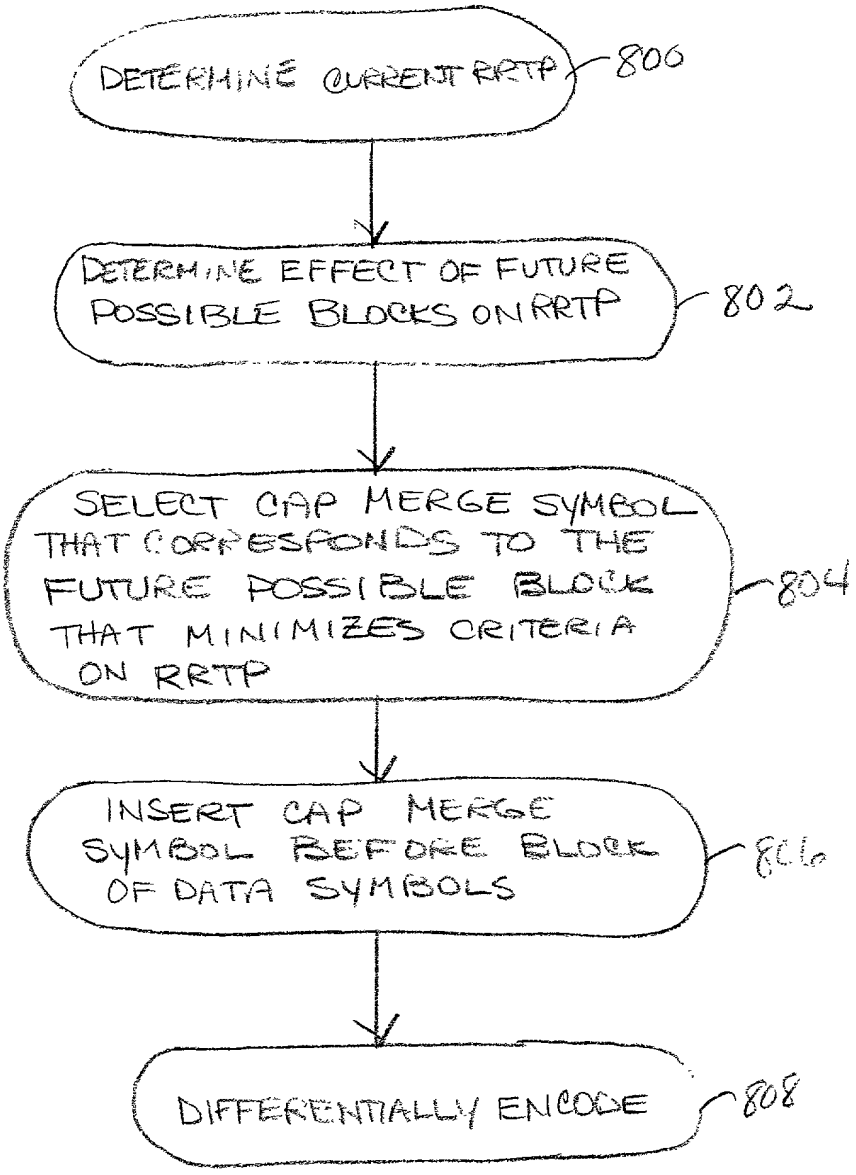


FIG 8A

NO. OF LEVELS M : 4
PREVIOUS OUTPUT LEVEL : 0
INPUT BLOCK : 0 1 3 2
CURRENT RRTP : -2

CANDIDATE MERGE SYMBOL 0

a_k		0	0	1	3	2
b_k	0	0	0	1	0	2
$DV(b_k)$		-3	-3	-1	-3	+1
$DSS(b_k)$		9	9	1	9	1
RRTP	-2	+2	+6	+2	+6	-2

⇒ ENDING /RRTP/ = 6
MAX /RRTP/ = 6

CANDIDATE MERGE SYMBOL 1

a_k		1	0	1	3	2
b_k	0	1	1	2	1	3
$DV(b_k)$		-1	-1	+1	-1	+3
$DSS(b_k)$		1	1	1	1	9
RRTP	-2	-6	-10	-14	-18	-14

⇒ ENDING /RRTP/ = 14
MAX / RRTP/ = 18

CANDIDATE MERGE SYMBOL 2

a_k		2	0	1	3	2
b_k	0	2	2	3	2	0
$DV(b_k)$		+1	+1	+3	+1	-3
$DSS(b_k)$		1	1	9	1	9
RRTP	-2	-6	-10	-6	-10	-6

⇒ ENDING /RRTP/ = 6
MAX/ RRTP/ = 10

CANDIDATE MERGE SYMBOL 3

a_k		3	0	1	3	2
b_k	0	3	3	0	3	1
$DV(b_k)$		+3	+3	-3	+3	-1
$DSS(b_k)$		9	9	9	9	1
RRTP	-2	+2	+6	+10	+14	+10

⇒ ENDING /RRTP/ = 10
MAX /RRTP/ = 14

FIG 8B

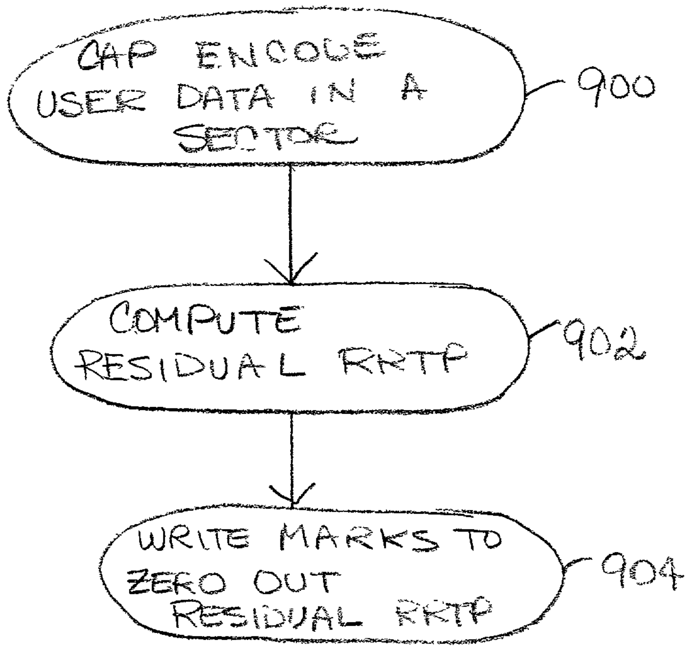

CAP ENCODE USER DATA IN A SECTOR
900
COMPUTE RESIDUAL RRTP
902
WRITE MARKS TO ZERO OUT RESIDUAL RRTP
904

FIG 9A

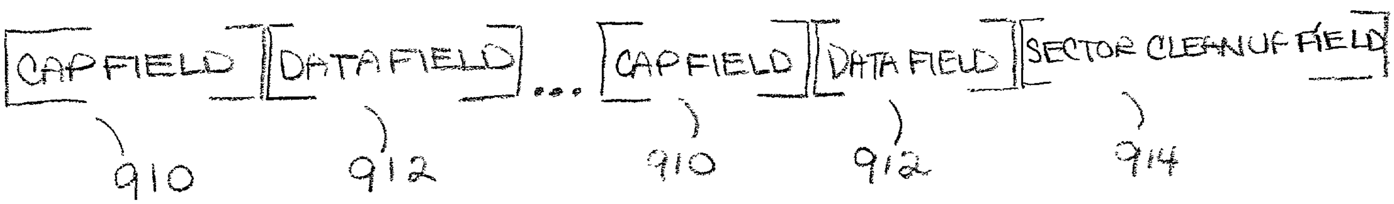

CAP FIELD
DATA FIELD
...
CAP FIELD
DATA FIELD
SECTOR CLEANUP FIELD
910
912
910
912
914

FIG 9B